



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[700877 DIPRO]
 Machine Id
CATERPILLAR 972M HLSJ02687
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP445527	VCP452308	VCP431157
Sample Date		Client Info		15 Apr 2024	27 Dec 2023	25 Sep 2023
Machine Age	hrs	Client Info		17043	15831	15087
Oil Age	hrs	Client Info		0	500	500
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	79	32	23
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	5	4	<1
Lead	ppm	ASTM D5185m	>40	<1	<1	2
Copper	ppm	ASTM D5185m	>330	2	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

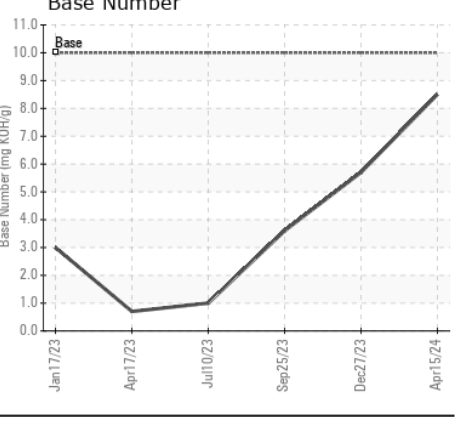
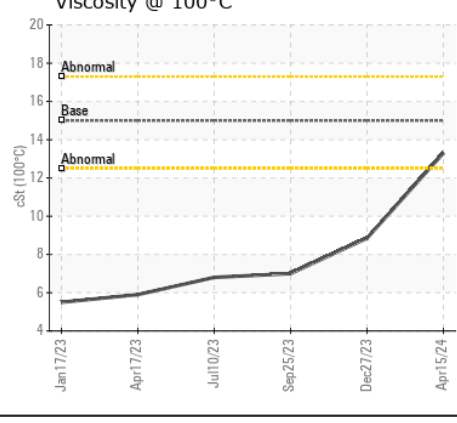
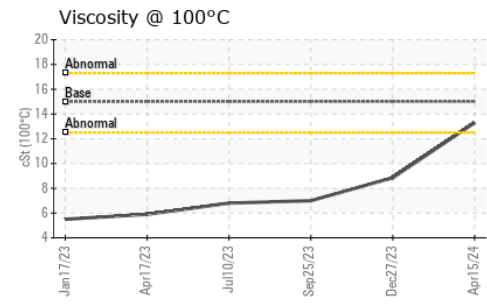
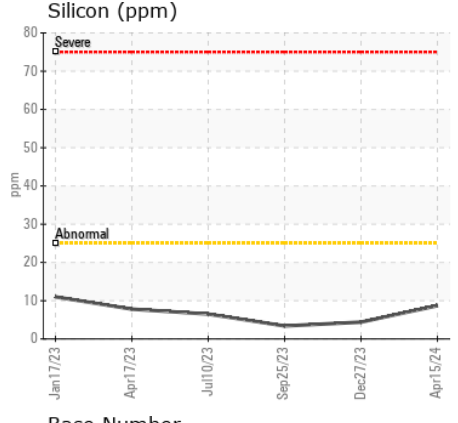
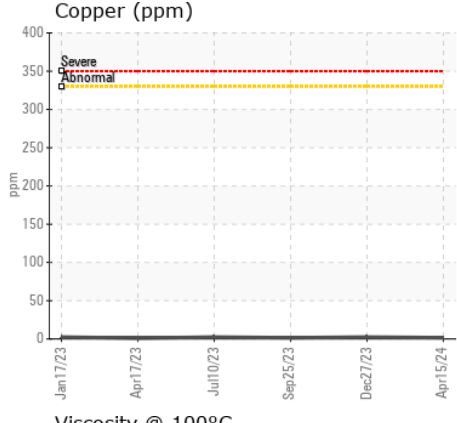
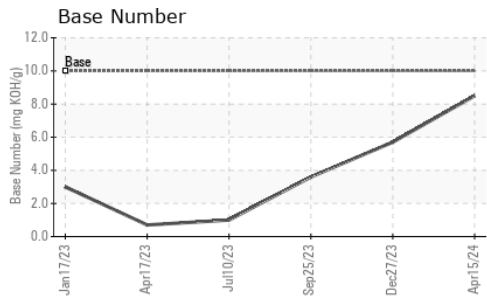
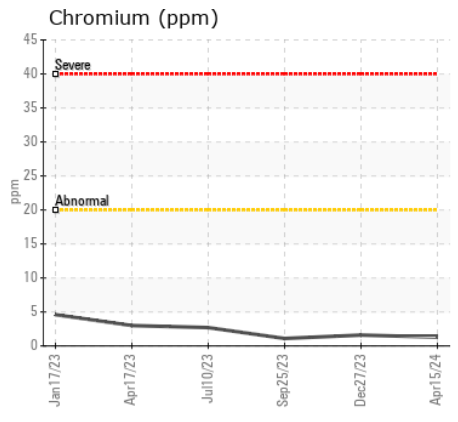
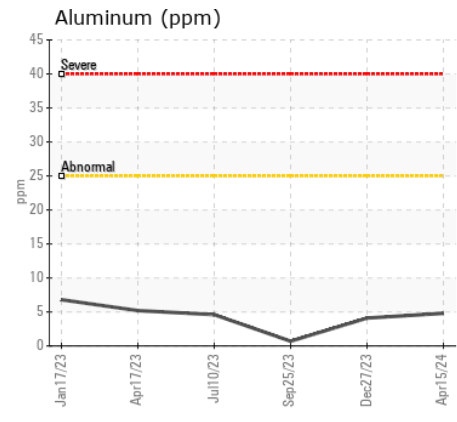
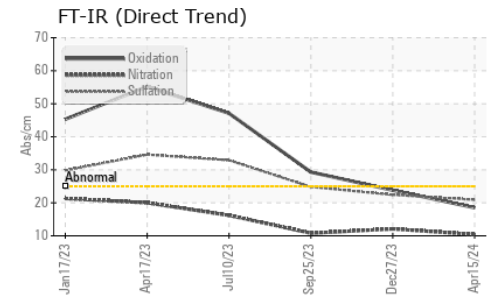
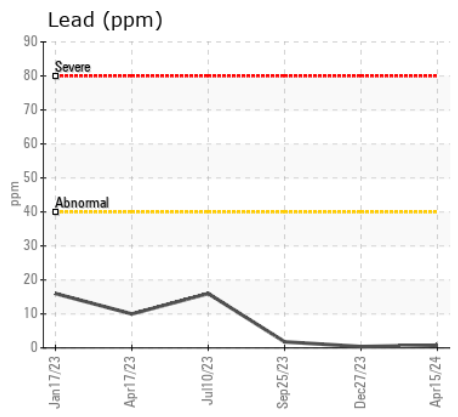
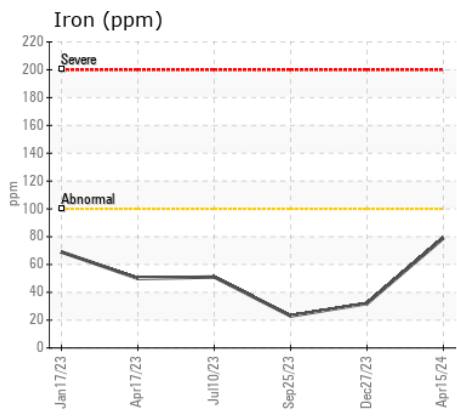
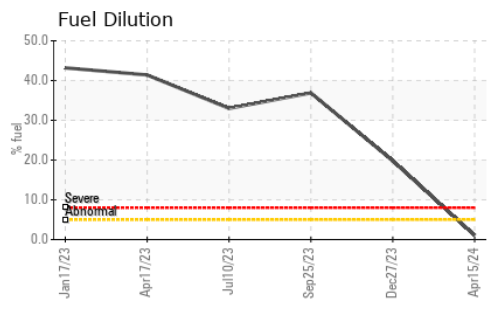
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	9	4	3
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel	%	ASTM D3524	>5	1.1	▲ 19.8	▲ 36.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.4	12.1	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	22.4	24.8
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		13	3	2
Boron	ppm	ASTM D5185m	2.5	0	0	0
Barium	ppm	ASTM D5185m	0.0	2	0	0
Molybdenum	ppm	ASTM D5185m	0.7	61	47	37
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	977	747	591
Calcium	ppm	ASTM D5185m	2057	1254	787	628
Phosphorus	ppm	ASTM D5185m	935	1095	776	588
Zinc	ppm	ASTM D5185m	1223	1310	951	742
Sulfur	ppm	ASTM D5185m	4079	3700	2343	1862
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	23.8	29.3
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.5	5.7	▲ 3.6
Visc @ 100°C	cSt	ASTM D445	15.0	13.3	▲ 8.85	▲ 7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP445527 **Received** : 26 Apr 2024
Lab Number : 06161261 **Tested** : 02 May 2024
Unique Number : 10996684 **Diagnosed** : 02 May 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

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To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)